CS 271 Computer Architecture and Assembly Language
Course Calendar* Spring 2019

***Weeks are shown Sunday-Sunday, Assignments are due the 2nd Sunday 11:59pm unless otherwise specified.**
Schedule subject to change based on material pace.
New Assignments are in BLACK. **Due Assignments are in RED.**

Unit / Week	Topics
#1: 03/31 – 04/07 **Syllabus Quiz** **Week 1 Summary Exercises** **Program #1** **Syllabus Quiz** **Week 1 Summary Exercises**	• Introductions • Programming languages • Virtual machines • Computer architectures, processor types, metrics • Machine instructions, instruction execution cycle • CISC, x86 architectures, Intel IA-32 architecture • Introduction to MASM assembly language. **Read** Irvine Chapter 1 Chapter 2.1, 2.2, 2.3 Chapter 3.1, 3.2, 3.3 (pg 71 only), 3.4, 3.5
#2: 04/07 – 04/14 **Week 2 Summary Exercises** **Program #2** **Quiz #1** **Week 2 Summary Exercises** **Program #1** **Quiz #1**	• MASM assembly language: ○ Constants, variables ○ Libraries, assembling, linking, loading ○ Addressing modes ○ Arithmetic operations ○ Conditions, decisions, repetition **Re-read** Irvine Chapter 1.3, 1.4 **Read** Irvine Chapter 4.1, 4.2, 4.5 (and 6.3)
#3: 04/14 – 04/21 **Week 3 Summary Exercises** **Week 3 Summary Exercises** **Program #2**	• MASM assembly language: ○ Modular development ○ Data validation ○ Debugging • Internal/external data representation **Read** Irvine Chapter 5.1, 5.2, 5.3, 5.4, 5.6, 5.7
#4: 04/21 – 04/28 **Week 4 Summary Exercises** **Program #3** **Week 4 Summary Exercises**	• Binary arithmetic • Floating-point representation • Parity, error detection/correction, Hamming codes **Read** Irvine Chapter 6.1, 6.2, 6.3, Chapter 7.3 Chapter 12.1
#5: 04/28 – 05/05 **Week 5 Summary Exercises** **Program #4** **Quiz #2** **Week 5 Summary Exercises** **Program #3** **Quiz #2**	• MASM procedures: ○ Calls/returns ○ Functional decomposition, parameters ○ Documentation • Introduction to the system stack **Read** Irvine Chapter 4.4 **Read** Irvine Chapter 8.1, 8.2

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#6: 05/05 – 05/12
 	
Program #4
	• MASM assembly language:
	  ○ More system stack
	  ○ Parameter passing
	• Review for Midterm Exam
	
	Midterm Exam
	(Available Thursday – Sunday only)

#7: 05/12 – 05/19
 	
Week 7 Summary Exercises
Program #5
 	
Week 7 Summary Exercises
	• MASM assembly language:
	  ○ More parameter passing
	  ○ Random numbers
	  ○ Arrays, array parameters
	
	Read Irvine Chapter 9.5

#8: 05/19 – 05/26
 	
Week 8 Summary Exercises
Program #6
Quiz #3
 	
Week 8 Summary Exercises
Program #5
Quiz #3
	• MASM assembly language:
	  ○ Data-related operators
	  ○ Low-level I/O
	• RPN
	• IA-32 floating-point unit (FPU)
	
	Read Irvine Chapter 9.1, 9.2, 9.4, 9.5
	Re-read Irvine Chapter 12.1

#9: 05/26 – 06/02
 	
Week 9 Summary Exercises
 	
Week 9 Summary Exercises
	• Recursion
	• MASM assembly language:
	  ○ Macros
	  ○ String processing
	• Digital logic level:
	  ○ Gates, circuits, integrated circuits

#10: 06/02 – 06/09 **Week 10 Summary Exercises** **Quiz #4** **Week 10 Summary Exercises** **Program #6 is due** **Quiz #4**	• Parallelism • Advanced architectures • Review for final exam
#11: 06/09 – 06/16 Finals Week	**Final Exam** **(Available Sunday – Wednesday only)**